



Focus

Used Shop Towels

The Washington Department of Ecology (Ecology) has received a number of questions about how the Dangerous Waste Regulations, Chapter 173-303 WAC, apply to used shop towels. This FOCUS is intended to provide guidance on ways to handle shop towels that become contaminated with hazardous substances. It is ultimately your responsibility to safely and properly handle used shop towels.

What Are The Problems With Used Shop Towels?

Shop towels (durable cloth wipers, rags or towels) are commonly used to spread cleaners and absorb or remove oil, grease and dirt. One of the most common contaminants is solvents which are used by auto repair shops, printers, circuit board manufacturers, etc., to clean parts and equipment. Shop towels that become too soiled for further use are often recycled. Recycling includes, but is not limited to, being cleaned by an industrial laundry service or dry cleaner. Disposable cloth rags or paper wipers are sometimes thrown away in a landfill or incinerated.

Many solvents contain chemicals that are ignitable, volatile or toxic. Solvents that contain chlorinated chemicals, such as methylene chloride, carbon tetrachloride and 1,1,1-trichloroethane, are toxic and do not break down easily in the environment. To determine the hazardous constituents in your solvent see the contents section on the product label or material safety data sheet (MSDS). Another concern is heavy metals and other contaminants absorbed onto the towel as a result of the cleaning operation/preparation of metal parts.

When improperly managed, used shop towels contaminated with hazardous substances pose a threat to worker health and public safety. Improper management may contribute to contamination of air, water and soil.

Ecology's Goals

- Ecology has been working with businesses that generate shop towels and industrial laundries that clean shop towels. We are trying to accomplish the following:
- Reduce the amount of ignitable, volatile and toxic chemicals used through substitution with less hazardous chemicals, when effective.
- Establish management practices that result in minimal amounts of hazardous chemicals on used shop towels that are sent to recyclers.
- Allow towels that are recycled and handled according to beset management practices, to be considered as managed in compliance with hazardous waste requirements. Recyclers may process shop towels without being permitted as a treatment facility under state and federal hazardous waste regulations.
- Ensure that hazardous wastes are safely managed from "cradle to grave" preventing the release of hazardous substances to the environment.
- Save money, raw materials and energy while keeping hazardous chemicals out of your local landfill.

Are Used Shop Towels Hazardous Waste?

Used shop towels contaminated with hazardous substances may designate as dangerous waste under Washington law. If your soiled towels are handled according to the following best management practices they are not subject to generator, transporter and permitted treatment, storage and disposal facility requirements of the Dangerous Waste Regulations and are not "counted" as a hazardous waste. If your towels are being disposed they must be managed as hazardous waste if they fail any hazardous waste tests (ignitability, toxicity, etc.).

REMEMBER: If you use disposable cloth rags or paper wipers that designate as dangerous waste, it is your responsibility to manage them as dangerous waste in accordance with the requirements of the Dangerous Waste Regulations.

Best Management Practices For Generators Of Shop Towels

Best management practices for businesses generating used shop towels shall include the following:

1. Use cloth or other durable material shop towels that can be cleaned and used again. This meets mandated priorities in the management of hazardous wastes by ensuring recycling versus disposal.
2. When possible, use non-hazardous or less hazardous cleaning solvents. Look for solvents that do not contain chlorinated compounds. Ask your cleaning supplies distributor for alternatives to solvents that will get your job done and/or call Ecology at the phone numbers shown under "Where To Go for More Information" (ask for someone in the Waste Reduction, Recycling and Litter Control Program).
3. Remove free liquids before tossing soiled shop towels in containers. This can be done by simple means like hand wringing or pressing while wearing proper protective equipment and clothing. An explosion-proof extractor or centrifuge can remove even more free liquids but **MUST** be suitable for use in operations involving volatile and flammable liquids. Free liquids should be collected and reused or, if not directly reused, managed as a dangerous waste.
4. Do not dispose of solvents by pouring them into containers of used shop towels. Such practices constitute disposal of dangerous waste which is subject to full regulation under Chapter 173-303 WAC.
5. For safety reasons keep incompatible wastes separated (e.g., don't mix rags with alcohols with rags with acids). Also, keep hazardous and non-hazardous shop towels segregated, per instructions of your recycler.
6. Make sure that used shop towels contaminated with hazardous substances are collected, transported and stored in closed containers. Accumulation/storage shall be in containers that are in good condition and labeled with the words "contaminated shop towels." There shall be adequate separation between containers to allow access for emergency equipment in case of fire. It is your responsibility to ensure that containers are compatible with the materials stored in them.
7. Containers holding flammable materials must be managed according to all local fire department standards. They must be sufficiently separated from all external sources of ignition. "No smoking" signs shall be legible and placed at all accumulation areas. Such areas must meet the minimum property line setback requirements. Container type, color, and labels must also meet local fire department codes.

8. It is your responsibility to obtain reasonable assurance that the recycling facility you use (whether on-site or hired out) is meeting local sewer discharge limits and other applicable environmental regulations. Do not use recyclers that discharge dangerous wastewaters to a drain field or cleaning solvents directly to the air.
9. The generator must ensure [optional for small quantity generators (SQG's)] that all employees are thoroughly familiar with proper waste handling, and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies. Employees must know the location of all fire extinguishers and fire alarm(s) and the telephone number of the fire department must be clearly visible next to all emergency communication devices such as telephones.
10. Used towels may not be accumulated for longer than 180 days before being recycled.

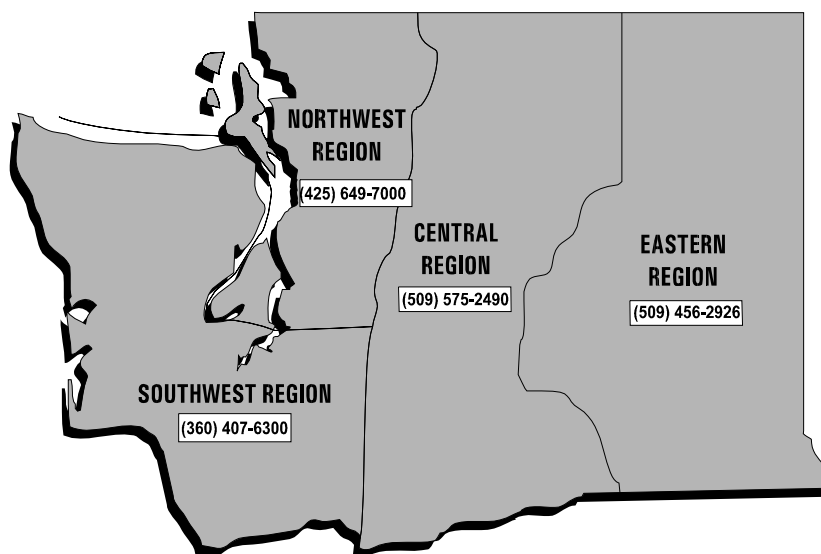
Best Management Practices For Recyclers

1. Make sure your customers are removing all free liquids from shop rags and separating hazardous from non-hazardous towels. During storage maintain separation of incompatible wastes.
2. Make sure that used shop towels with hazardous solvents are collected, transported and stored in closed containers. Storage shall be in containers that are in good condition and labeled with the words "contaminated shop towels." There shall be adequate separation between containers to allow access of emergency equipment in case of fire. It is your responsibility to ensure that containers are compatible with the materials stored in them.
3. Containers holding flammable materials must be managed according to all local fire department standards. They must be sufficiently separated from all external sources of ignition. "No smoking" signs shall be legible and placed at all accumulation areas. Such areas must meet the minimum property line setback requirements. Container type, color, and labels must also meet local fire department codes.
4. Make sure you meet all applicable federal, state and local environmental standards such as pretreatment requirements for the discharge of wastewater to a publicly owned treatment works (POTW), requirements for maintaining closed loop systems (for dry cleaners) or other recycling systems, and requirements for the proper disposal of pre-treatment and/or recycling residuals.
5. The owner/operator must ensure that all employees are thoroughly familiar with proper waste handling, and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies. Employees must know the location of all fire extinguishers and fire alarm(s) and the telephone number of the fire department must be clearly visible next to all emergency communication devices such as telephones.

For More Information

Ecology has experienced Pollution Prevention Consultants available to advise you on solvent substitution techniques and issues. They can provide information over the telephone, or make educational (non-enforcement) visits to your work site to provide free technical assistance on solvent substitution, economic considerations, pollution prevention opportunities, and suppliers. Use the regional phone numbers below to ask for a Toxics Reduction Specialist.

Northwest Region	(425) 649-7000	Central Region	(509) 456-2926
Southwest Region	(360) 407-6300	Eastern Region	(509) 575-2491



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If you have special accommodation needs or require this document in alternative format, please contact the Hazardous Waste and Toxics Reduction Program at (360) 407-6700 (voice) or (360) 407-6006 (TDD).

Ecology's telecommunications device for the deaf (TDD) number is (360) 407-6006. Regional TDD numbers are:

CRO (TDD) (509) 454-7673
ERO (TDD) (509) 458-2055

NWRO (TDD) (425) 649-4259
SWRO (TDD) (360) 407-6306



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